speech extremely inspiring and helpful to our young University.

The week-end was devoted to excursions, and amongst other places visited were the mines at Gympie and at Mount Morgan, the sugar and fruit-growing districts of Nambour and Cleveland, and the Prickly Pear infested country of the middle West, and the Prickly Pear experimental station at Dulacca. The officer in charge of this station is Dr. Jean White, who at present has more than 2000 experimental plots under investigation, and the object of whose work is to ascertain the best means of exterminating the pest.

After the close of the Brisbane session, the party separated, some returning to Europe by way of America, others through Java and India, and a large number of the party travelled by the mail route through the Suez Canal.

[One of the week-end excursions during the visit of the British Association to Melbourne, referred to in an article in our issue of October 8, was to the Warburton district, where the giant ferns and gum-trees, rising in some cases to a height of about three hundred feet, gave the visitors impressive views of Australian bush scenery. The two photographs here reproduced show the party watching a wood-chopping contest, and in one of the gullies of the forest rich in objects of botanical interest.]

NOTES.

THE Harveian oration on advances in knowledge regarding the circulation and attributes of the blood since Harvey's time, was delivered at the Royal College of Physicians on Monday, October 19, by Sir Douglas Powell. After the oration Sir Ronald Ross was presented with the Bissett Hawkins Memorial Medal for distinguished services in the advancement of sanitary science and public health.

THE question of the continuance of meetings of scientific societies during the war, raised by Dr. W. T. Calman in a letter which appears elsewhere in this issue, is one which each society must decide for itself after taking into consideration the papers likely to be forthcoming, and the number of fellows or members likely to attend meetings at which they are presented. It is to be hoped, however, that if meetings go on as hitherto, any German or Austrian members of the societies will absent themselves for the time being, as objection might be taken to their presence under existing conditions.

MANY leading men of science in the British Isles, as well as distinguished representatives of other branches of learning, have signed a statement which has just been issued in reply to manifestoes published by various university professors in Germany. The statement refers to the policy of national aggrandisement based on the threat of war advocated by von Treitschke, von Bülow, von Bernhardi, and strongly supported by public opinion in Germany; and it summarises the diplomatic papers in which the events are described that forced Great Britain into the present war if she wished to preserve an honourable position among nations. The concluding paragraph is as follows:—"The German professors appear to think that Germany has in this matter some considerable body of sympathisers in the universities of Great Britain. They are gravely mistaken. Never within our lifetime has this country been so united on any great political issue. We ourselves have a real and deep admiration for German scholarship and science. We have many ties with Germany, ties of comradeship, of respect, and of affection. We grieve profoundly that, under the baleful influence of a military system and its lawless dreams of conquest, she whom we once honoured now stands revealed as the common enemy of Europe and of all peoples which respect the Law of Nations. We must carry on the war on which we have entered. For us, as for Belgium, it is a war of defence, waged for liberty and peace."

THE Royal Photographic Society has just opened to the public a house exhibition of photographs by Mr. Lewis Balfour, "Bird Life on the Bass Rock." There are upwards of one hundred of these pictures showing the various sea birds and incidents in their lives. The public will be admitted free, daily from 11 a.m. to 5 p.m., until November 28.

THE second Thomas Hawksley lecture will be delivered in the meeting hall of the Institution of Mechanical Engineers on Friday evening, October 30, by Mr. W. B. Bryan, the subject being "Pumping and other Machinery for Waterworks and Drainage." The Thomas Hawksley fund was founded by Mr. Charles Hawksley to perpetuate the memory of his father who was president of the Institution of Civil Engineers in 1871 and 1872, and president of the Institution of Mechanical Engineers in 1876 and 1877. The income of the fund is devoted to the maintenance of a lecture and to the award by the council of the Institution of Mechanical Engineers annually a "Thomas Hawksley" gold medal, with or without a premium, in money, books, or otherwise for the best original paper read at a general meeting of the institution or printed in its proceedings.

PROF. DAVID TODD, who passed through London a few days ago on his return to the United States from Russia, where he observed the total solar eclipse of August 21, as will be described in a later issue, brought with him a very successful kinematograph film of the eclipse, and by the courtesy of Messrs. Pathé Frères it was projected upon the screen of their theatre in Charing Cross Road. The film reproduced the solar corona with the narrow crescents before and after it with great fidelity. It was taken by Dr. N. V. E. Nordenmark, of Stockholm, at Sollefteå, Sweden, latitude N. 63° 12′, longitude 45′ west of Stockholm, where the sky was absolutely free from cloud. The lens was a 50 mm. Zeiss of 305 mm. focus, and the exposures were about six to the second. In all there are more than seven hundred excellent pictures of the corona, which is well seen even into the partial phase.

THE death of Dr. Anthony Traill, provost of Trinity College, Dublin (writes E. P. C.), removes a forceful personality from Irish life. Of striking all-round ability, never brilliant, but possessing an indefatigable power of work, he outdistanced many of his colleagues who, from the academic point of view, were more highly endowed. Taking his LL.D. at twenty-six, he obtained fellowship next year, 1865, and shortly afterwards he entered the medical school, taking his M.D. in 1874. In 1899 he was co-opted a senior fellow, and was appointed provost in 1904, *vice* Salmon. If he was wanting in some qualities usually looked for in a provost, he possessed, and in a high degree, others not so often found in academic men, and thus he was able to bring the college safely through the extraordinarily critical times of the Parliamentary settlement of the Irish University question, and the, in some ways more delicate one, of internal reform. For this reason, and the untiring energy with which he strove to widen its activities, he deserves the hearty gratitude of the college, and must be ranked as one of its most efficient provosts. Of the man himself, it is difficult to give an idea in a few lines. His interests were exceedingly wide. As an athlete, an alpine climber, a good cricketer, a rifle shot, as a college fellow and tutor, as a member of public boards and commissions, as a financial adviser to the Church of Ireland, he always acted up to the maxim, "Whatsoever thy hand findeth to do, do it with thy might." Up to his seventy-fourth year he was remarkable for bodily vigour, even then shooting over his bogs for an entire day without a sign of fatigue; and what must be regarded as his premature death at seventy-six was due to his almost contemptuous disregard of painful symptoms to which far younger men would have yielded. He was seen at his best as a most kindly and entertaining host in the family home at Ballylough.

OWING to the absorbing attention given by our newspaper Press to the war, we receive but the scantiest notices of important earthquakes, even when they occur in our own Colonies. From the *Morning Post* for October 15, we learn that, at 2.15 a.m. on the day before, an earthquake was felt all over the colony of Jamaica, strong enough to awaken the inhabitants, but not to cause any damage to buildings.

ON October 17, at about 8 a.m., the whole of Greece was shaken by violent earthquake shocks, the first of which lasted twenty seconds. The centre was apparently near Thebes, where a number of houses fell, especially in the villages of Cappareni and Pirri, which were partially destroyed. Atalante and Chalcis were also seriously injured, and all the railway stations on the Larissa line were damaged. The shocks were also felt in the Peloponnesus, the Cyclades, Euboea, and the Ionian Islands. Several houses at Athens and the Piraeus were cracked, but none of the ancient monuments suffered. A few persons were injured, but, so far as known, no lives were lost. Though much less severe than the earthquakes of April 20 and 27, 1894, the recent shock seems to have originated in the same region, and probably in the same great fault. This fault was traced by M. Papavasiliou for a distance of thirty-three miles, passing through Atalante, in a direction parallel to the adjacent Gulf of Euboea. The throw was generally small, though in places it amounted to as much as 4 or 5 ft. (see NATURE, vol. l., p. 607).

THE *Philippine Journal of Science* for April last supplies an interesting account by Mr. E. B. Christie of the pottery industry at San Nicolas, in the Ilocos Norte province. A modified form of the potter's wheel is used, the clay being shaped into a short, thick cylinder, and laid on a board which rests upon a second board, but not connected with it by a bearing-pin. From time to time the woman worker gives the upper board a turn with one hand while she works the clay with the other. At first she uses only her fingers to shape the vessel. Later on she holds a smooth stone against the inner surface of the vessel with her left hand while with the other she works a paddle to form the outer surface. With the paddle she beats the clay, causing it to spread. When the vessel is complete, she smooths the outside with a shell and smears it with red earth mixed with water in order to produce a uniform colour. If she does not do this, the clay assumes a weak, irregular colour when it is fired. If she desires to blacken the pot, it is, while still very hot, covered with rice bran. This becomes imperfectly consumed, and leaves a black deposit on the clay. The industry is purely domestic, but it is of some economical importance.

IN the October number of *Man* Dr. H. Basedow furnishes an obituary notice of Mary Seymour, the last relic of the lost Tasmanian race. Born in 1833, she died in 1913, her mother being a full-blooded Tasmanian aboriginal, who married a whaler named Nat Thomas. On her marriage to Joseph Seymour, Mary for the first time learned a little English, and she claimed to be the first woman born on Kangaroo Island. She used to give graphic accounts of her experiences in the pioneering days of South Australia. She was of short but robust stature, and her features indicated a keen intellect combined with a determined will. Seen in profile, the deep notch below the glabella at the root of the nasal bones betrayed a Tasmanoid inheritance, described by Dr. Garson (Journal Anthropological Institute, vol. xxvii., plate 27) as one of the characteristics of the race. The hair was silken, white, and wavy, the eyebrows bushy. Her lips and skin were remarkably free from hair, and her skin was of a dark bronze-brown and wrinkled with age. The lower jaw was well developed, and had a big loose flap of skin attached to it that produced a very noticeable double-chin. The keen, small eyes lay deep within their sockets; their colour was a greyish-brown. It is interesting to compare the photographs accompanying the article with those published by Mr. H. Ling Roth in his classical memoir descriptive of this interesting race.

THE preventive treatment of fowl cholera is dealt with by Mr. Philip B. Hadley in Bulletin 159, Agricultural Experiment Station of the Rhode Island State College, U.S.A. Various avirulent cultures of the fowl cholera micro-organism were found to be protective to rabbits against certain virulent strains of the organism, either singly or in combination. Attempts are now being made to produce a corresponding protection among poultry, for fowl cholera is a disease which frequently causes considerable loss to the poultry farmer.

In the report of the Leyden Museum of Natural History for the year ending September 1, 1914, Dr. E. D. Van Oort, the director, pays a well-deserved tribute to the work of his predecessor, the late Dr. Jentink. The additions to the collection were numerous, and the number of visitors during the year 3134.

Recruits of the Transport Corps are receiving instruction from their officers in the north hall of the British Museum (Natural History) on the external characters and osteology of the horse. For this purpose a mounted skin and a skeleton of the horse have been removed from their cases and placed on the floor of the hall, from which the general public are excluded during the periods of instruction. We understand that the officers of the Veterinary Department, aided by the Transport Corps, have succeeded in rendering a large number of wounded or otherwise injured horses at the front fit for further service; such horses include many taken from the Germans.

In an editorial article on eugenics and war in the October issue of the *Eugenics Review,* it is pointed out that "the British Empire, by reason of maintaining her army on a voluntary basis, must inevitably suffer racially more than other nations. The battle death-rate must strike her unevenly and reduce the number of her males amongst the class from whom it is most desirable that she should produce the stock of the future. In the countries with universal compulsory service, the reduction in effective males will be spread over the entire population; good and bad will alike be reduced. In this country the types which are physically and mentally superior will volunteer for active service. . . . The sample of those killed will not be the average of the race, but the best type of the race. . . . Although the system may give victory and national prestige, the racial effect must be injurious."

The contents of Nos. 3 and 4 (issued in a single cover) of vol. xxxvi. of *Notes from the Leyden Museum* consist exclusively of papers on invertebrates, the longest of which is a continuation of Dr. R. Van Eecke's "Fauna Simalurensis," dealing with Indo-Australian Lepidoptera. Dr. J. H. Vernhout also contributes a further instalment of the results of his study of the land and fresh-water molluscs of the Dutch American colonies, discussing in this instance those of Curaçao. It would be natural to expect that the land-snails of the Curaçao group of islands should exhibit a close affinity with those of Venezuela; as a matter of fact, this is far from being the case, only seven out of twenty-five species recorded from the three islands being common to the mainland. Nor is this all, for many even of the genera are quite unknown on the South American continent, but are more nearly related to or identical with Central American and Jamaican types.

In these columns (October 2, 1913) reference was made to the regional survey undertaken by the Croydon Natural History and Scientific Society. In the 1913–14 volume of the society's Proceedings and Transactions, which we have received, an account of the general progress of this survey is given in the form of a report by the survey committee. The scheme has aroused much interest, both within and outside the society, has caused the revival of the photographic section, and increased activity in the botanical, zoological, and archæological sections, and has brought about closer co-operation between all the sections of the society. Mr. C. C. Fagg, secretary of the regional survey committee, contributes an introductory paper on the mineral and agricultural industries of the survey area, dealing with these from the geographical point of view, with plates and a geological (drift) map of the Croydon area.

We have received the report of the Botanical Survey of India for the year 1913–14, in which the officiating director of the survey, Mr. C. C. Calder, summarises the extensive and valuable work done during this period. Under the heading of systematic work, references are made to the results, published in the records of the survey and in other journals, of the field investigations made by members of the survey staff and others, and it is interesting to note that in many cases these results include not only lists of species collected, but studies of the vegetation in various aspects, the distribution of the species being correlated with the adaptations of the plants to their environment and their aggregation into plant communities. This ecological side of field work in botany has not hitherto figured largely in Indian botanical publications, but as the systematic survey proceeds it will doubtless be accompanied by further and more intensive distributional and ecological study. The chemical part of the work hitherto undertaken at the Indian Museum, Calcutta, has now been transferred to other departments, while the newly appointed economic botanist to the survey, Dr. H. G. Carter, has begun the collection of materials necessary for the compilation of the work on Indian plants of economic importance urged by the Royal Society some years ago. There is also in active preparation an index to all species of Indian plants not included in Hooker's "Flora of India"; this index already contains nearly 900 species, and will be published as a single number of the records of the survey.

The report for the past year of the New Zealand Department of Scenery Preservation states that 3000 acres were reserved, bringing the total area of scenic reserves in the Dominion to 214,000 acres, comprised in 363 different reserves. It is pointed out that the great bulk of this land is unsuitable for settlement, while it assists to conserve water, protect soil, and prevent denudation. Private residents have shown remarkable munificence in presenting areas to the

Government. The Scenery Preservation Act of 1903, consolidated in the Act of 1908, provided a total sum of 100,000*l.* Each year a portion of this is authorised for expenditure; a balance now remains of 27,136*l.* It is curious that the native Maoris are the only section of the population that does not approve of the movement. Among details of interest the following may be cited. Deer are extremely detrimental to forest. The lakes of New Zealand have been formed by the erosive action of huge bodies of ice or by volcanic action; but Waikaremoana was formed by an immense fault in the stratification of the country. The greater part of forest is beech, with its two varieties of black and red (*Nothofagus solanderi* and *fusca*). Native flowers and birds are well looked after in these reserves, and the National Society for the Protection and Preservation of New Zealand Forests and Bird Life has just been formed. "Each member of the society should consider himself an unofficial ranger." It is noteworthy that most of these reserves coincide with health resorts and sporting centres. Perhaps the most beautiful of them all is Day's Bay, only forty minutes from Wellington, and a favourite excursion. This bit of forest is as it was 1000 years ago. Another gem is the reserve on the Waganui river, which is "the finest sight of its kind in the whole world." "It is no compliment," said a Russian traveller who had seen the great rivers of the world, "to call the Wanganui 'the New Zealand Rhine.'"

In Publication No. 4 of the Meteorological Institute of Chile Dr. W. Knoche gives a very interesting discussion of the hourly observations specially made at Mataveri, Easter Island, for one year ended April, 1912. From a meteorological point of view the position of the island is important for the study of atmospherical circulation; it lies in the south-east Pacific Ocean (approximately 27° 10′ S., 109° 26′ W.) in one of the permanent areas of high barometric pressure, and within the limit of the trade-winds, especially in summer. Notwithstanding the uniformity of the climate, one year is naturally too short a period to deal with satisfactorily, and we are glad to see that Dr. Knoche has been able to make arrangements for observations to be continued, although on a smaller scale. The mean barometric pressure (M.S.L.) was: January, 30·08 in., July, 30·06 in., year, 30·06 in.; but conditions are said to differ considerably in different years, probably owing to the shifting of large masses of air in the high-pressure area. Rainfall during the summer half-year amounted to 22·2 in., and in other months to 27·9 in. The mean of the hottest month was 74·8° in February, and of the coldest 64·2° in October. The absolute extremes were 87·8° in February, and 51·1° in July. An unpleasant feature of the island is that it is infested by large swarms of mosquitoes. The volume is well illustrated by curves and diagrams.

The Journal of the Washington Academy of Sciences for September 19 contains a short account of the results obtained by Messrs. G. K. Burgess and J. N. Kellberg, of the Bureau of Standards, during an accurate investigation of the changes of the electrical resistance of pure iron wire up to a temperature of 1000° C. A platinum and an iron wire of about an ohm resistance were wound on porcelain insulators in an evacuated quartz tube, heated in an electric furnace. The resistance of each wire was determined by the bridge method with an accuracy of 0·00001 ohm, during the slow heating and cooling of the furnace. That of the platinum wire served to determine the temperature of the iron wire. The resistance of pure iron on heating was found to increase at a rate which itself increases up to 757° C., the temperature at which the iron ceases to be ferromagnetic. Above that temperature the rate of increase again decreases, so that at 895° C. the resistance reaches a maximum, and at 906° C. a minimum beyond which it appears to increase regularly. On cooling the minimum occurs at 880° C., the maximum at 870° C., and the change in the rate of decrease again at 757° C. The authors attribute the non-reversible change at the higher temperatures to recrystallisation, but they have not been able to detect any crystalline change at the 757° C. point.

The forthcoming books of the *Cambridge University Press* include:—A Theory of Time and Space, by A. A. Robb; The Surface of the Earth: Elementary, Physical, and Economic Geography, by H. Pickles; The House-Fly, by Dr. C. Gordon Hewitt (in the Cambridge Zoological Series); A Book of Simple Gardening, by D. Lowe; and (for the University of Chicago Press) Water Reptiles of the Past and Present, by S. W. Williston; and Assyrian and Babylonian Letters, edited by R. F. Harper, vol. xiv.; and *Mr. John Murray* announces:—A Hunter-Naturalist in the Brazilian Wilderness, by Theodore Roosevelt, illustrated; Emma Darwin: a Century of Family Letters, 1792–1896, edited by H. Litchfield, two vols., illustrated (the second volume of the work will contain many unpublished letters of Charles Darwin, supplementing his biography by giving some idea of the more intimate side of his life); Concerning Animals and other Matters, by E. H. Aitken ("EHA"), with a Memoir of the author by Surgeon-General W. B. Bannerman, illustrated; A History of the Gold Coast and Ashanti, from the Earliest Times to the Beginning of the Twentieth Century, by W. W. Claridge, two vols.; a new and enlarged edition of The Rudiments of Practical Mathematics, by A. Consterdine and A. Barnes.

Many rare and valuable books and papers relating to mathematical, physical, and natural sciences, and to technology, are included in a catalogue, "Bibliotheca Chemico-Mathematica," part x., just received from Messrs. Henry Sotheran and Co., 140 Strand, W.C., and 43 Piccadilly, W. The catalogue contains descriptive notes upon a large number of the books and authors, and should be of assistance to bibliophiles in search of important scientific works. We notice particularly books by, and on, Pasteur, Paracelsus, Priestley, Réaumur, Regiomontanus, Respighi, and many other authors, both ancient and modern.